

## Technical Memorandum

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**To:** Falcon Highlands Metropolitan District, c/o Clifton Larson Allen LLP  
**From:** JDS-Hydro Consultants, Inc.  
**Date:** September 7, 2020  
**Subject:** Partial Tenant Finish Lot 1 Rolling Thunder Business Park

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The water issue for the partial interior remodel of the existing building on the existing Lot 1 of the Rolling Thunder Business Park. The proposal is a partial interior remodel of a portion of an existing building which resides on an existing lot in an existing commercial subdivision. The existing subdivision is Rolling Thunder Business Park was platted in or around 2008.

The existing building has served as Peak Gymnastics and existed on Lot 1 being 1.11 acres in size.

- There is no change in the lot or its size
- There is no change in irrigation
- There is no change in the exterior site
- All bathroom facilities will remain the same

Changes are (relative to water use)

- Remodel interior to allow for a tiny brewing operation (1.5 barrels)
- Add one sink

### **BACKGROUND FACTS**

1. **Subdivison Facts;** Rolling Thunder Business Park was originally a 13 lot commercial subdivision received a water commitment from the Falcon Highlands Metropolitan District 8.0 acre-feet. The 8.0 AF was estimated to include irrigation and domestic use. An additional Utility Tract was platted for the siting of a permanent water tank and permanent pump station. This facility includes only native landscaping and has no plumbing facilities. The commitment considered no water use or need for the Utility Tract. The subdivision was approved in 2008 under this commitment. Lots 9 and 10 were later combined as lot 9A, so the current lot count is actually only 12 lots, but the overall boundary and lands remain as originally platted. Table 1 shows the current lots making up Rolling Thunder Business Park as well as the actual land area in each lot. (Data taken from El Paso County Assessor). Figure 1 shows the actual lots since 2 lots were re-platted into a single lot. No questions as to water use or need were raised when that land use action occurred. The District makes no commitment of water to individual lots or allocation among the lots in the subdivision, the commitment was issued as a whole.

2. **Existing Development Facts;** A substantial portion of Rolling Thunder Business Park has been developed, so we now know the actual water being used by each lot that is developed. Table 1 shows the lots that are developed and the actual metered water being used on each of those developed lots. Metered water use includes irrigation and domestic use at each developed lot (data taken from FHMD billing records). The total acreage of developable land in Rolling Business Park is totaled in Table 1. It is 11.068 gross acres. From Table 1

TABLE 1. Existing and Projected Water Use						
Rolling Thunder Business Park		Revised and Updated August, 2020			Expanded Table	
Falcon Highlands Metropolitan District					August, 2020	
Full year use records up through August 31, 2019						
Address	Lot #	Lot SF	Lot in Acres from EPCo Assessor Map	Actual Metered Annual Water Use (Gallons/Year)	Representing Actual Acres	If one individually allocated 8.0 AF to lots Theoretical Allocation (AF)
10778 Maltese Point	8		1.050	63870	1.05	0.759
Undeveloped	7	19711	0.453			0.327
Undeveloped	6	20677	0.475			0.343
10682 Maltese Point	5	22116	0.508	56120	0.508	0.367
10706 Maltese Point	4	22116	0.508	12460	0.508	0.367
Undeveloped	3	22115	0.508			0.367
Undeveloped	2	22115	0.508			0.367
10610 Maltese Point (Modified)	1		1.110	216840	1.11	0.802
10611 Maltese (New-- No records Yet)	9A		1.610			1.164
Undeveloped	11		2.000			1.446
Undeveloped	12		1.170			0.846
10755 Maltese Point <sup>Note 1</sup>	13		1.170	110627	Actual	0.846
Denotes Existing Developed Lots				Actual Metered Water (Gallons)	Developed Acreage	8.00
Total Acres			11.068	459917	4.35	
				(1.41 AF)		
Total Water Allotment (Gallons)			2,606,800	17.64%	39.26%	
			(8 AF/Year)			
Projected Full Buildout with Modified Lot 1						
Projected Gallons			1171428			
Projected Acre-Feet			3.59	Entire Subdivision		
Projected Buildout if entire subdivision was re-purposed as Lot 1						
Projected Gallons			1932252			
Projected Acre-Feet			5.93	Entire Subdivision		
Note 1. A metering inconsistency was discovered at Lot 13 (10755 Maltese Point) but since the lot use is almost identical to Lots, 4, 5, and 8, we were easily able to conservatively estimate the use as 1.5 X the relative Building SF ratio for Lots, 4, 5, and 8						
JDS-Hydro Consultants Inc.						

3. **Prior Water Questions;** There were no questions as to water use in any prior land use actions such as the recent combination of lots Lots 9 and 10.
4. **The Proposed Tenant Finish Facts;** A proposed interior remodel was proposed for the existing building on existing Lot 1. The District requested that we consider the following:

- a) Does the internal change require any upgrade in water service from the existing 1 inch tap and consequent Tap fees ?
- b) Is there any overall impact from any water change to the subdivision?

The facts of the change as we consider any possible impact on water:

- There is no change proposed for the lot
- There is no change to the site or site improvements
- There is no additional area added to the building
- There will be no additional bathroom facilities
- A portion of the interior would have a tiny brewery added (1.5 barrel unit) While the operator suggested that brewing would be two days a week/we overestimated at 5 days/week.
- One sink will be added
- The main purpose will remain a gym, but without substantial coaching staff, and adult use, so no transient parents.

### **ANALYSIS**

1. The use of overall floor space for the proposed use vs the prior use will decrease the actual staff, and guest numbers as far fewer staff are required to support adult gym use and parental attendance is not expected. Therefore, in our professional opinion, any change in plumbing (addition of 1 sink) will not increase water use.
2. The highest prior water use at the facility was 154,440 gallons over a 12-month period. This includes all water use including irrigation.
3. It is our professional opinion that the existing use more than estimates continued building water use and site water use.
4. A 1.5 barrel brewing system is very small. The proposed brewery is a 1.5 barrel system which is extremely small by commercial micro-brewery standards. While the brewer represents that beer would be brewed roughly two to three days week, we tend to size facilities based on the barrel capacity on a five day/week basis even though 2-3 days is the more common use ratio.

The average amount of water used to brew beer is estimated at a 5:1 ratio and therefore the maximum amount of water used on a weekly and annual basis is as follows;

1.5 X 32 gallons X 5 water/beer ratio X 5 days/week = 1200 gallons/week which results in **62,400 gallons of water /year.**

5. Even making a extremely conservative estimate by adding the historical use to the maximum brewing use, Even if the new brewery load is directly added to the historic

use without any offset, the expected use at 10610 Maltese moves to 216,840 gallons/year or 0.665 annual Acre-feet.

6. This projected use remains within is within the prescribed SFE for the original 1-inch water tap and service. Therefore, it is our professional opinion that no change in water service and tap size is necessary. The original 1-inch tap assigned to 10610 Maltese Pt remains adequate and no additional fees would be necessary.
7. Possible impact on subdivision. See revised Table 1. Although the District does not allocate water to specific lots within a subdivision, for this exercise, we have made that allocation in red in the Table 1. Based on the relative land area of each lot, a theoretical allocation to lot 1 based on the 8.0 AF/Rolling Thunder Business Park, the allocation for Lot 1 would be 0.802 Annual Acre-feet. Using actual useage

**Our Professional Opinion;**

1. The projected maximum use at Lot 1 would be 0.665 AF/Year and the theoretical lot allocation would be 0.802 AF/Year. (See Table 1) In our opinion 0.665 is only 83% of the theoretical allocation and would not represent an increase in use relative to a theoretical allocation.
2. Based on the actual use in developed areas, even if the entire subdivision was modified as Lot 1, our professional opinion is that the trajectory of water use in Rolling Thunder Business Park is that 5.93 AF/year might be needed. 5.93 is actually only 74.1% of the projected need which does not represent an increase in use.
3. It is our professional opinion that the representation that the change in the interior of the building on Lot 1 does not represent a 10% increase in water use in the Rolling Thunder Business Park. Actually, it is our professional opinion that the current trajectory of use in Rolling Thunder Business Park is substantially less than the original allocation.